

Work Order ID 108808

108808

Page 1

October-29-13 10:07:23 AM

Item ID: D2052

Accept

N900040100

Setup Start

NS1

Revision ID:

Revision ID:

Item Name: Bracket

Start Date: 10/29/13

Start Qty: 20.00

Required Date: 10/29/13

Req'd Qty: 20.00

* 20 * * 37 *

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: ML5

Date: 13-10-31

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

REFERENCES

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
---	--	---	--

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General		
Bending	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>
Centre Not Concentric	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>
Cracks	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>
Crimp/Kink/Ripple/Wave	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>
Cuffs	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>
Crushing	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>
Heat Treat	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>
Inspection Strip in Tube	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>	Other <input type="checkbox"/>
Marks/Chatter	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>	
Turning Sequence	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>	
Wave/Twist in Tube	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	

Work Order ID 108808

October-29-13 10:07:23 AM

108808

Page 2

Item ID: D2052

Accept

Revision ID:

Item Name: Bracket

Start Date: 10/29/13 Start Qty: 20.00

20

Required Date: 10/29/13 Req'd Qty: 20.00

20

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 DAS 27 9-89	B 11/04			37	0		
130 *130* Brake NC Brake NC	NC BRAKE Memo	0.00		DAS 30 9-89		37	0		13/11/04
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00	Skp B 11/04			37	0		

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>
---	--	---	--

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY									
Landing Gear			General						
	Bending		Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>		Outside Dimensions <input type="checkbox"/>		Pressure/Forced <input type="checkbox"/>	
	Centre Not Concentric		BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>		Over/Under tolerance <input type="checkbox"/>		Set-up <input type="checkbox"/>	
	Cracks		Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>		Part Incorrect <input type="checkbox"/>		Temperature/Cure <input type="checkbox"/>	
	Crimp/Kink/Ripple/Wave		Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>		Part Lost/Missing <input type="checkbox"/>		Weld <input type="checkbox"/>	
	Cuffs		Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>		Part Moved <input type="checkbox"/>		Wrong Stock Pulled <input type="checkbox"/>	
	Crushing		Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>		Positioned Wrong <input type="checkbox"/>			
	Heat Treat		Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>		Power Loss/Surge <input type="checkbox"/>			
	Inspection Strip in Tube		Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>					
	Marks/Chatter		Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>					
	Turning Sequence		Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>					
	Wave/Twist in Tube		Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>					

Work Order ID 108808***108808***

Page 3

October-29-13 10:07:23 AM

Item ID: D2052

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Bracket

Stop ***NS2***Start Date: 10/29/13 Start Qty: 20.00 ***20***

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 20.00 ***20***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

150

HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

37

13-11-7

160

160

Powdercoat

Powder Coating

Black Sandtex(Ref 4.3-5.7) per QSI005 4.3

0.00

Memo

0.00

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

7:30
320°
8:00

DAS

27

9-89

37

13-11-8

DAS

34

9-89

170

170

QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

DAS

27

9-89

13-11-08

37

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS								
Part No. _____			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>							
NCR No. _____			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>							
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>							
			Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>								
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector					
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved														
FAULT CATEGORY														
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function				<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence				<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			

Work Order ID 108808***108808***

Page 4

October-29-13 10:07:23 AM

Item ID: D2052

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Bracket

Stop

NS2

Start Date: 10/29/13 Start Qty: 20.00

20

Cust Item ID:

Required Date: 10/29/13 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

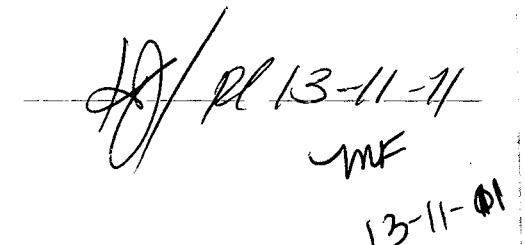
SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* Packaging	Identify as per dwg & Stock Location: <u>GA</u>	0.00							
	Memo	0.00							
190 *190* QC	QC21- Final Inspection - Work Order Release	0.00							
	Memo	0.00							


 13-11-11
 MF
 13-11-01

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>	DISPOSITION <input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved	AGAINST DEPARTMENT/PROCESS <input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier	<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other
---	--	---	--

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General									
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced						
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up						
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure						
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld						
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled						
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other						
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge							
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread								
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set								
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration								
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence								

Picklist Print

October-29-13 10:07:22 AM

Page 1

Work Order ID: 108808

Parent Item: D2052

Parent Item Name: Bracket

Start Date: 10/29/13

Required Date: 10/29/13

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP C01.08.21Added Finishing SM(Issue this IPP with part number D2053)

IPP Rev:D now water jet 07-10-25 DD

IPP Rev:E 08-05-14 chg to revD as per ECN1171 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M5052H32S.090 5052-H32 .090 Sheet		Purchased	No			100	sf	58.0600	0.129	2.71579		A 13-11-03	

Location	Loc Qty	Loc Code
MAT022	58.06	
118641	20.26	
121780	13.8	
125552	24	

125552 → 5.00

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General								
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced					
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up					
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure					
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld					
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled					
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other					
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge						
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread							
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set							
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration							
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence							

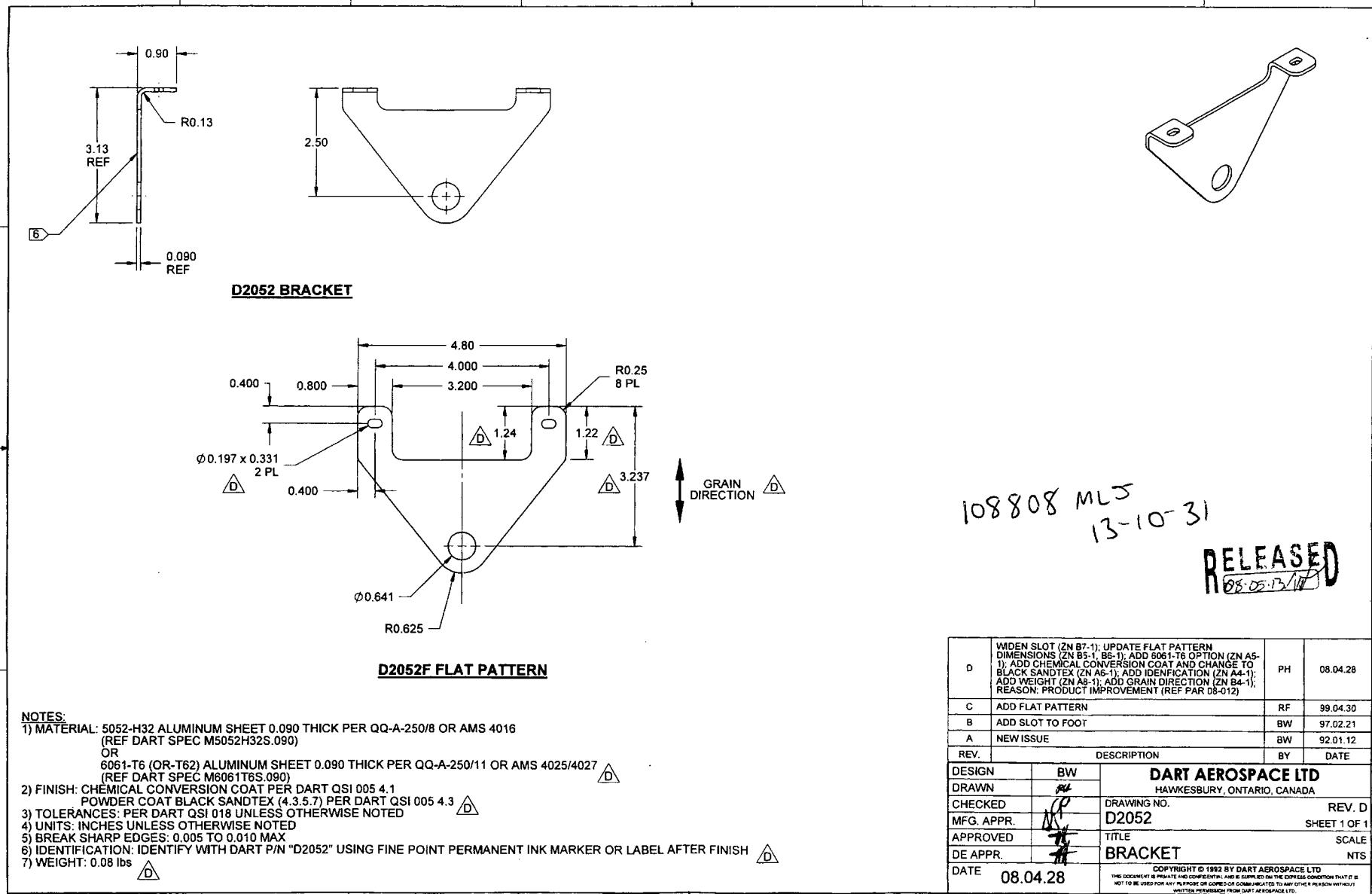
DART AEROSPACE LTD	Work Order:	108808
Description: Bracket	Part Number:	D2052
Inspection Dwg: D2052	Rev: D	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:	<i>Tk</i>	Audited by:	<i>SHP</i>	Prototype Approval:	N/A
Date:	13.11.03	Date:	13/12/01	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	08.06.11	New Issue	KJ/DD	



108808 MLJ
13-10-31

RELEASED
08-05-13/10

D	WIDEN SLOT (ZN B7-1); UPDATE FLAT PATTERN DIMENSIONS (ZN B5-1, B6-1); ADD 6061-T6 OPTION (ZN AS-1); ADD CHEMICAL CONVERSION COAT AND CHANGE TO BLACK SANDTEX (ZN A6-1); ADD IDENTIFICATION (ZN A4-1); ADD WEIGHT (ZN A8-1); ADD GRAIN DIRECTION (ZN B4-1); REASON: PRODUCT IMPROVEMENT (REF PAR D8-012)	PH	08.04.28
C	ADD FLAT PATTERN	RF	99.04.30
B	ADD SLOT TO FOOT	BW	97.02.21
A	NEW ISSUE	BW	92.01.12
REV.	DESCRIPTION	BY	DATE
DESIGN	BW	DART AEROSPACE LTD	
DRAWN	RE	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RP	DRAWING NO.	REV. D
MFG. APPR.	MR	D2052	SHEET 1 OF 1
APPROVED	MM	TITLE	SCALE
DE APPR.	MM	BRACKET	NTS
DATE	08.04.28	COPYRIGHT © 1992 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	